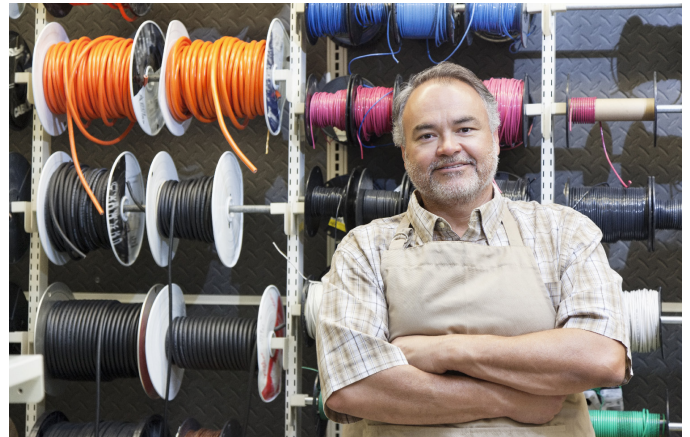


JOBS IN MAINE

ONLINE JOB POSTINGS BY INDUSTRY,
OCCUPATION, SKILLS, AND EDUCATION



Introduction

There is currently an intense focus on job growth in Maine and across the country, and rightfully so. As a nation, we continue to climb out of a deep economic recession. Unemployment remains high across the rest of the nation, and here in Maine we're in the midst of a debate about how to move our economy forward. A key to this discussion is how we can better prepare our workers and increase the quality of our workforce with available resources.

There is little doubt that a highly educated and trained workforce is a critical component of economic growth. One of the key measures of a skilled workforce is higher degree attainment. Maine's workforce still lags behind New England in degree attainment with just 37.3% of Mainers age 25 and older holding an associate's degree or higher, compared to just over 44% in New England [Source: *Maine Economic Growth Council, Measures of Growth In Focus 2013*].

This gap in educational attainment puts Maine residents at a disadvantage for earnings potential and professional advancement, and limits the state's ability to retain, grow, and attract knowledge-based businesses and jobs. This is a contributing factor in Maine's low per capita personal income ranking of 31st in the nation in 2010. This is the lowest in New England and just 75% of the New England average [Source: *Maine Economic Growth Council, Measures of Growth In Focus 2013*]. Median earnings increase steadily with educational attainment for Maine's population age 25 and over, from \$18,557 for those with less than a high school diploma to over \$52,000 for those with a graduate or professional degree [Source: *Maine Economic Growth Council, Measures of Growth In Focus 2013*].

Educational attainment is critical to our economy now and we can expect it to become even more important in the future. Nearly two-thirds (63%) of all jobs will require at least some postsecondary education or training by 2018, compared to just 28% in 1973 [Source: *Help Wanted: Projections of Job and Education Requirements Through 2018*, Georgetown University, Center on Education and the Workforce, June 2010].

Why a Quarterly Online Job Postings Report?

MDF is releasing this report for two primary reasons. First is to provide timely data about occupations and jobs advertised in the Maine economy, as well as the skills and education associated with those postings. Second is to help today's job seekers understand what types of education and training might prove most useful because, as researchers at Georgetown University have found, "it still pays to earn a college degree, but not all college degrees are created equal," [Source: *Hard Times 2013: College Majors, Unemployment and Earnings*, Georgetown University, Center on Education and the Workforce].

This report is intended to complement the projections from the Maine Department of Labor's Center for Workforce Research on growing occupations by education level in the *Maine Job Outlook 2010-2020* publication. This report's real-time analysis of quarterly online job postings as well as skills, experience, and top college majors in demand, helps to provide a richer overall story about employment in Maine – now and into the future.

The Nature of Online Job Postings Data

This report utilizes data from online job postings which has limitations. Online job postings are not synonymous with job vacancies, as the number, composition, and distribution of postings by occupation or industry do not necessarily represent the marketplace of job openings. A single posting can advertise multiple job openings. Duplicate postings, and postings that are not job openings, do exist. Some jobs are not posted online, and certain occupations, industries, and geographical areas may be underrepresented. Changes in posting behavior or collection procedures can produce changes in volume that are unrelated to actual demand for workers.

In spite of these limitations, online job postings do track with overall employment numbers and can be used to:

- Look at top-line trends, as one of multiple economic indicators
- Provide insights into demand for certain occupations, with the caveats listed above

- Identify types of employers or industry sectors which are advertising
- Indicate possible mismatches between job seekers and job postings

Online job posting data alone should not be the sole basis for policy development. It can bring to light trends and highlight opportunities, that when combined with other state and federal employment data, can lead to good policy development.

Executive Summary

The data in this report is listed in six figures and documents the following trends during the first two quarters of 2013 (January to June):

- The top 20 occupations Maine employers are looking to hire
- The Maine industries with the most job postings
- Skills associated with online job postings
- Work experience associated with online job postings
- Top higher education majors/degrees associated with online job postings
- Recent historic quarterly employment and hiring activity in Maine (2007-2012)

Top 20 Occupations Maine Employers Are Seeking to Hire Include High-Wage and Low-Wage Opportunities

The occupations with the most job postings include a mix of higher wage, specialized positions and lower wage, less technical positions. Registered nurses top the list of the most advertised positions, followed by several categories related to retail sales, wholesale, and customer service. Although the top occupations are not primarily the higher wage, more specialized positions, it is encouraging to see software developers, physicians, and accountants, for example, each with several hundred job postings in the first half of the year.

Health Care and Education Industries Top the List with the Most Job Postings

Hospitals top the industry list with the most job postings. Educational services, ambulatory health services, and professional, technical and scientific services round out the top four. The food and beverage sector comes in at number five, which may reflect a seasonal increase to prepare for the Maine summer season.

Soft Skills in Demand

Soft skills are prominent throughout these job postings. The ability to communicate well, to coordinate projects and tasks, function at a high level in the business environment, solve problems and provide good customer service are universally valued by Maine employers. The only specific task-related skill that made the top five is software and programming skills.

Business and STEM Degrees Matter

There were 561 postings for jobs requiring general business administration degrees. The other degrees rounding off the top five on the list were more specialized: nursing science, computer science, engineering, and social work. Interestingly, more than half of the top 20 degrees in demand are STEM-related (Science, Technology, Engineering, or Mathematics).

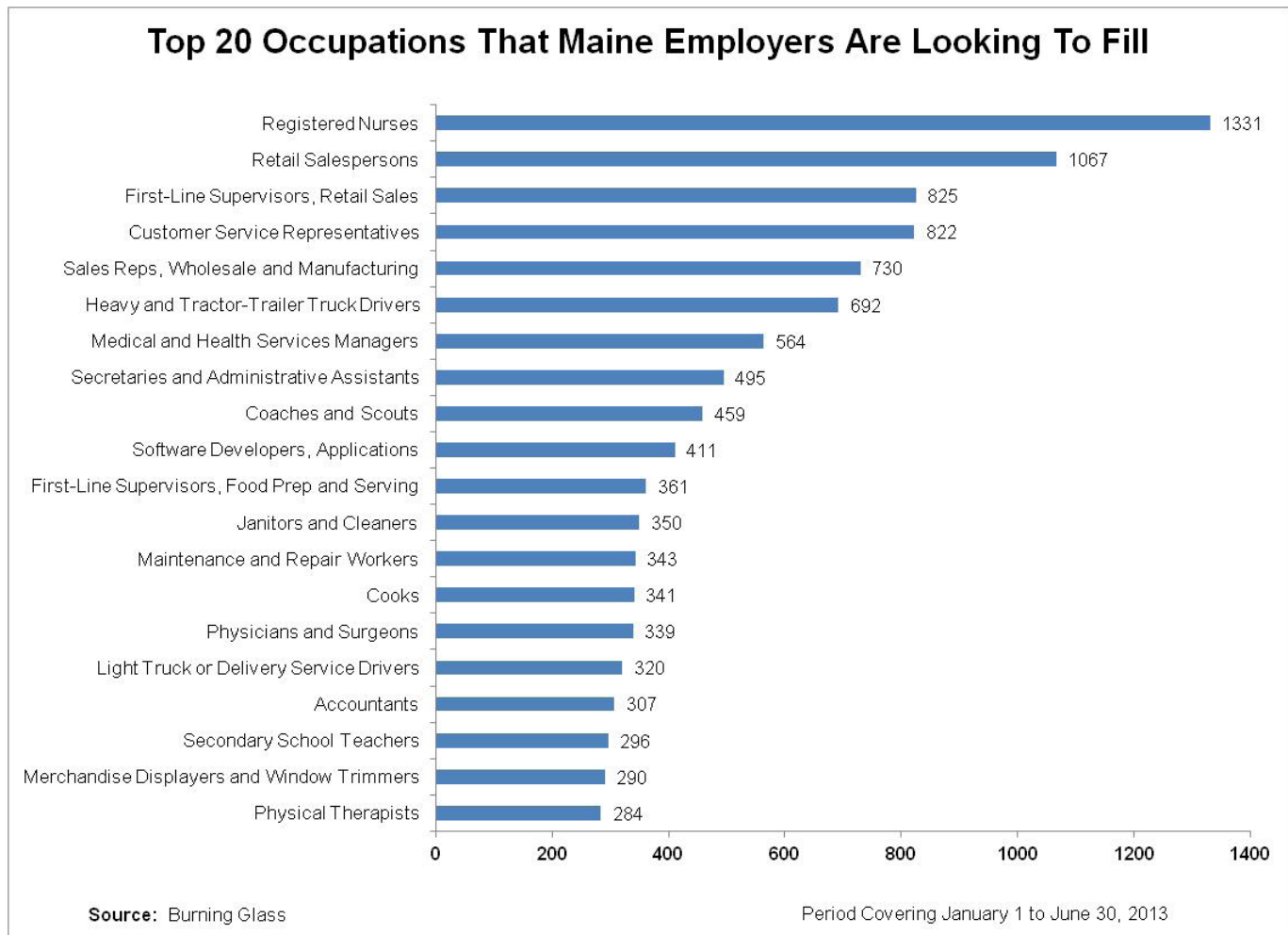
Figure 1.

Figure 1 documents the top 20 occupations associated with job postings listed online or in social media sites by Maine employers during the first two quarters of 2013 and includes the number of jobs advertised in the period for each of the occupations. Registered nurse positions top the list with over 1,300 listings during the first half of 2013, followed by retail sales jobs, sales supervisors, customer service positions, and wholesale and manufacturing sales positions. Taken together, the sales-related positions total just over 2,600 job postings.

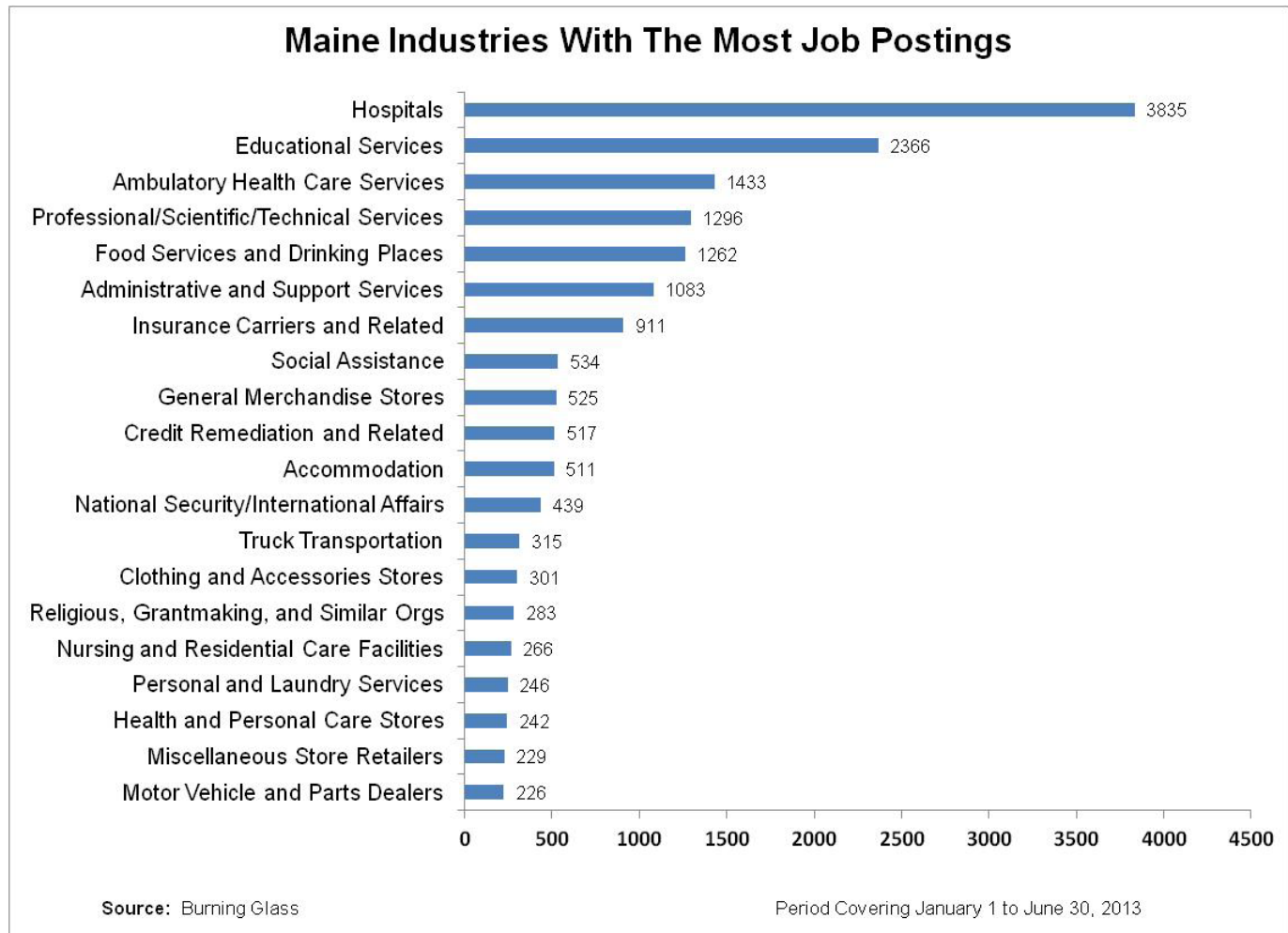
Figure 2.

Figure 2 illustrates the industry sectors with the greatest number of job postings in the first two quarters of 2013. At the top of the list are hospitals with over 3,800 jobs posted during this period, followed by educational services, ambulatory health care services, professional/scientific/technical services, and food and beverage positions. Educational services are employers which provide education and training such as schools, colleges, universities, and training centers. Employers in the ambulatory health care services sector provide health care services directly or indirectly to ambulatory patients and primarily offer outpatient services. Professional, scientific and technical services occupations typically require a high degree of expertise and training, and may include: legal services, accounting, architectural, engineering, specialized design services, computer services, consulting services, research services, advertising services, and more. Food and beverage occupations are typically related to restaurants, caterers and bars.

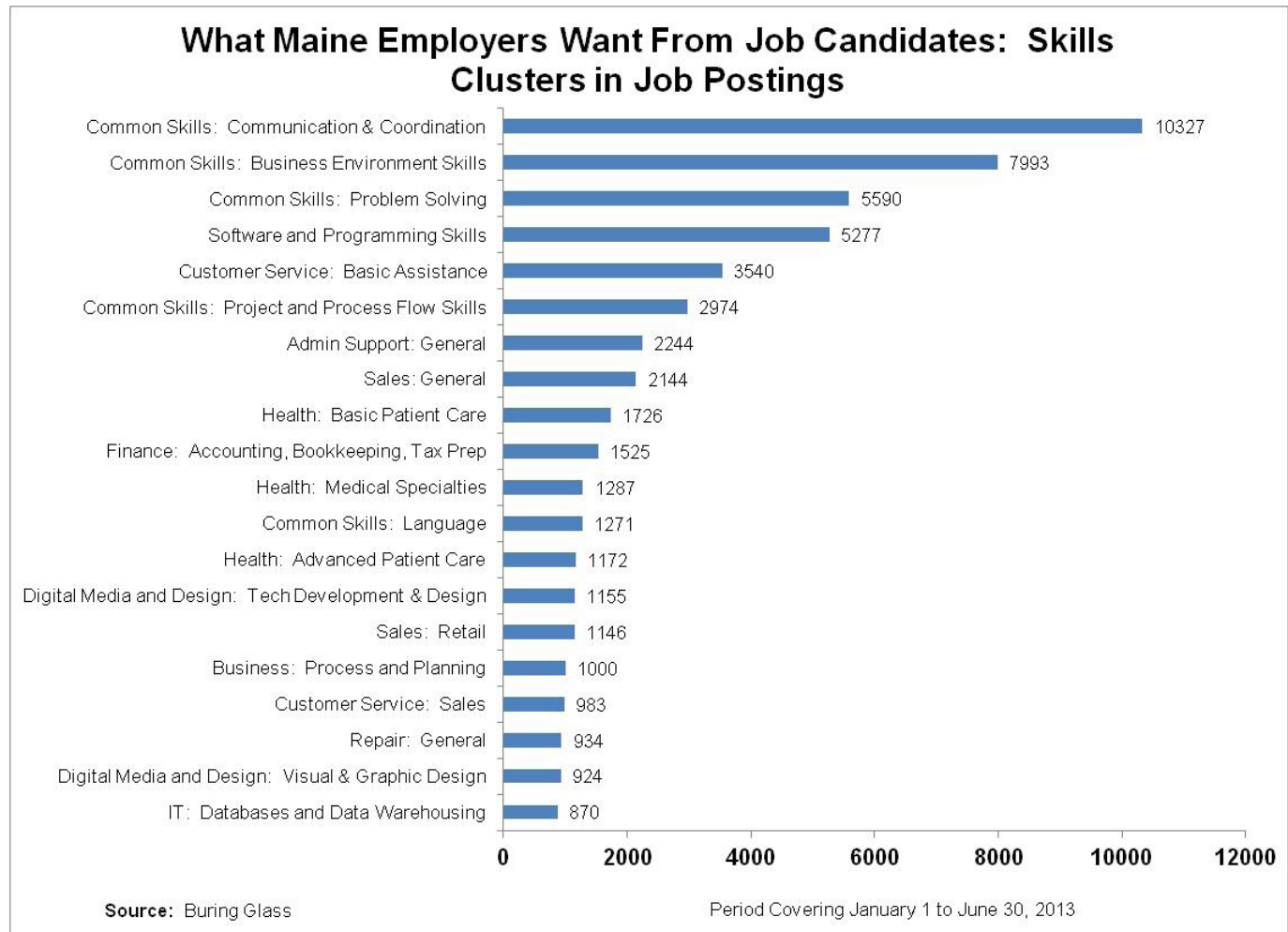
Figure 3.

Figure 3 shows the skills clusters most commonly associated with these online job postings. The top skills are primarily soft skills, including communication, problem solving, and customer service. More specific business-related skills and technical software programming also show up in the top five.

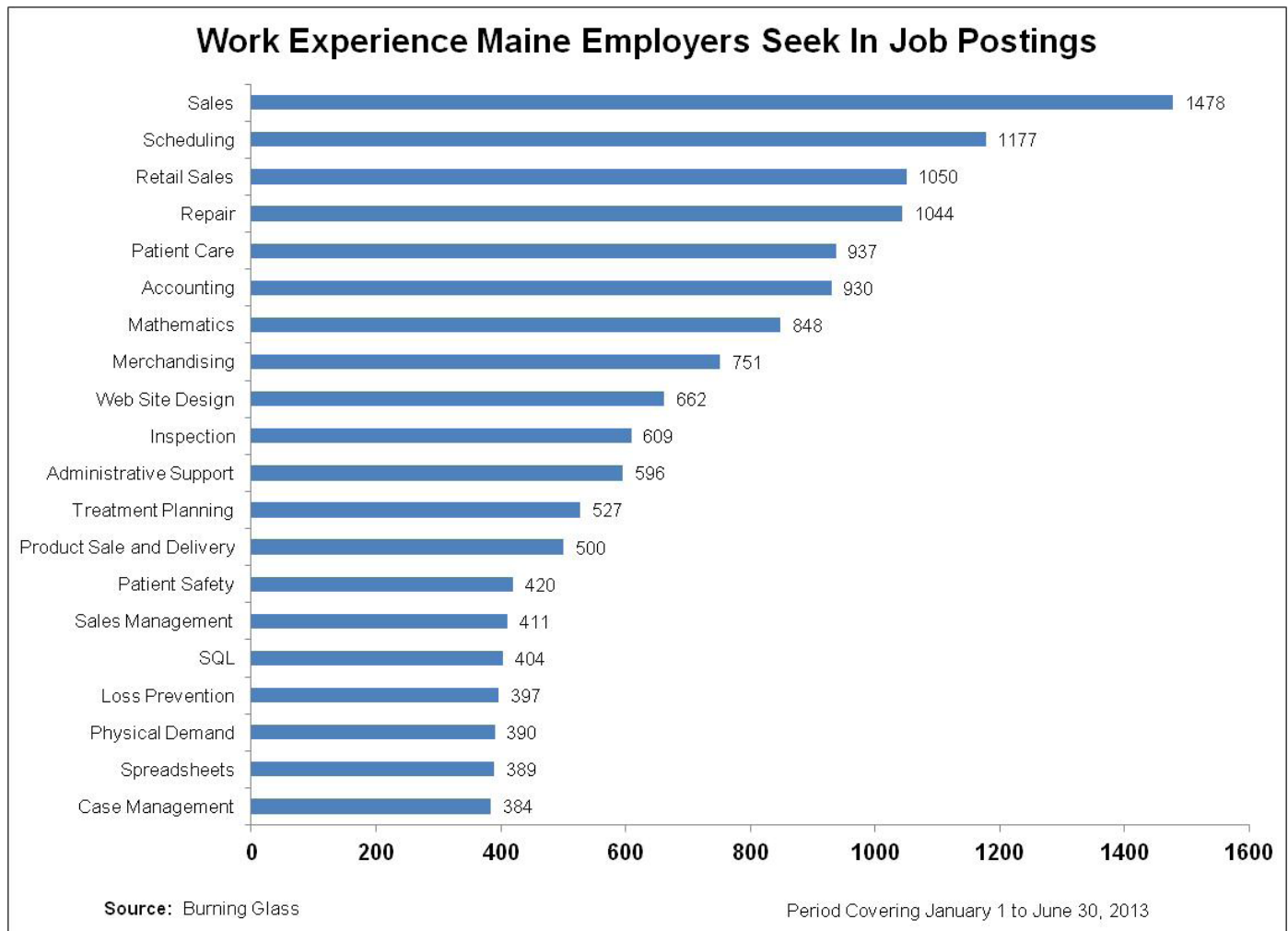
Figure 4.

Figure 4 shows the work experience most in demand by Maine employers based on how often they are mentioned or listed in job postings. Sales experience, in a variety of forms, tops the list. Taken together, there were over 2,500 job postings that asked for sales experience of some kind in the first half of 2013.

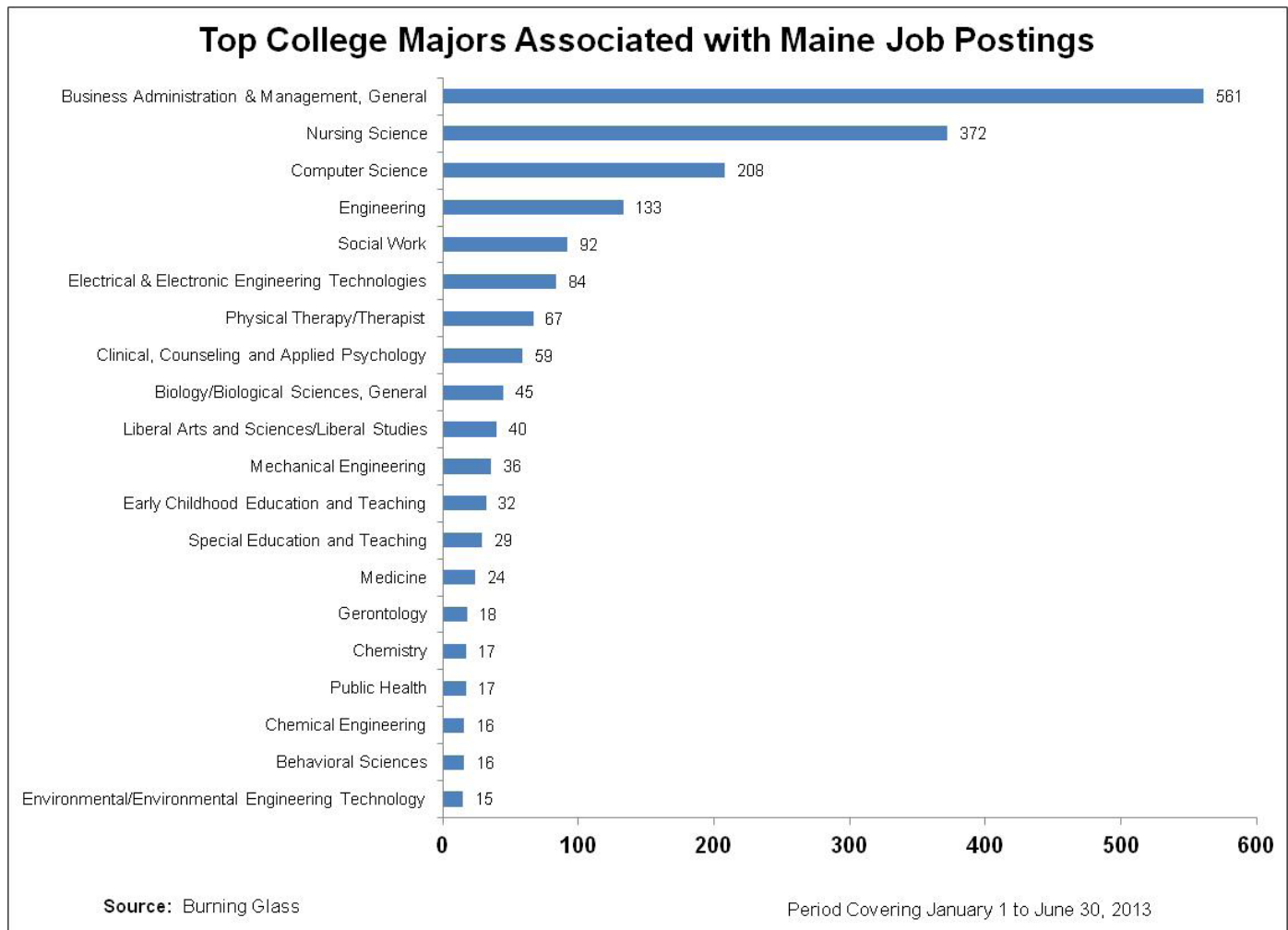
Figure 5.

Figure 5 details the college degrees or majors that are most often included as part of a job posting. The most common degree was general business administration and management associated with 561 job postings. Rounding off the top five were more skill-specific degrees that include nursing, computer science, engineering, and social work.

Figure 6.

Maine Quarterly Employment and New Hires Q1 2007 - Q2 2012								
	Quarter 1		Quarter 2		Quarter 3		Quarter 4	
Year	Total	New	Total	New	Total	New	Total	New
2007	567,175	35,387	572,917	31,086	602,853	42,158	596,303	40,828
2008	570,102	35,291	577,365	29,799	603,618	41,608	592,972	37,983
2009	554,065	30,130	557,008	21,357	577,412	33,720	570,858	33,849
2010	542,912	27,830	551,994	23,847	576,999	36,682	571,585	41,434
2011	542,409	30,251	551,782	25,428	581,510	37,311	575,369	38,255
2012	546,863	29,255	557,183	N/A	N/A	N/A	N/A	N/A
Source: U.S. Census, Longitudinal Employer-Household Dynamics								

Figure 6 shows quarterly employment and new hire history for Maine. Quarterly employment is the estimate of the total number of jobs on the first day of the reference quarter. Beginning-of-quarter employment counts are similar to point-in-time employment measures, such as the QCEW (see: www.bls.gov/cew/). New hires are the estimated number of workers who started a job that they had not held within the past year and the job turned into a job that lasted at least a full quarter with a given employer. This data provides some historical context for the online posting data in terms of past trends in actual employment numbers and hiring activity from quarter to quarter.

Methodology

Online job posting data is gathered from current online job listings and from jobs-related data on social media sites like Facebook and LinkedIn. This data eliminates duplicate job listings if the job is listed on more than one search site or is listed over a long period of time.

Data analysis (skills, degrees, work experience, etc.) was conducted using Burning Glass Technologies online Labor/Insight™ tool. This is an interactive, report-generating application that gives users real-time access to a comprehensive database of demand (jobs) data. It is powered by Burning Glass's technology for jobs data aggregation, parsing, extraction, and analysis, which translates free-text job postings into actionable intelligence on the nature and content of employer demand. Burning Glass's parsing technology can extract, derive, and infer more than 70 data elements from any given free-text job listing. This technology is applied to a database of more than 7 million online job openings updated daily from over 17,000 job boards, newspapers, and employer sites.

Data reporting the quarterly hiring activity of Maine employers is obtained from the U.S. Census Bureau, Longitudinal Employer-Household Dynamics, Quarterly Workforce Indicators (QWI). The QWI is a set of economic indicators—including employment, job creation, wages, and worker turnover—that can be queried by different levels of geography—state, county, metro/micropolitan area, and workforce investment area—as well as by detailed industry, sex, and age of workers. All QWI are based on longitudinal job histories linking an individual with an employer over time.

Conclusions

Online job posting data brings a considerable amount of real-time information to the job discussion. Combined with other employment data and economic indicators, this information can help tell a bigger story. This source of data continues to evolve and improve to better aid the larger policy discussion.

We feel that this can be helped in two ways:

1. Continue peer review of this data for the purpose of improving its ability to accurately help develop policy and investment decisions in Maine.
2. Support the efforts of the Maine Department of Labor to establish and sustain an ongoing job vacancy survey that would provide greater detail and certainty when making policy decisions effecting human capital development and employment in Maine.

About the Maine Development Foundation

The Maine Development Foundation (MDF) is a private non-partisan membership organization that drives sustainable, long-term economic growth for the State of Maine. MDF's strategic focus is a productive workforce. We believe that a productive worker is one that is educated, healthy, innovative, and engaged in their community and the economy.

MDF stimulates new ideas, develops leaders, and provides common ground for solving problems and advancing issues by:

- **Empowering** leaders
- **Strengthening** communities, and
- **Guiding** public policy with trusted economic research

Created in statute in 1978, MDF is a unique and trusted nonprofit. MDF works statewide across all sectors in a strictly non-partisan manner.

Acknowledgements

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Citing Information in This Report

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